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MANDARIN IMMERSION SCHOOL:

A CASE STUDY

by

Susan J. Koehn

A capstone submitted in partial fulfillment of the
requirements for the degree of Master of Arts in English as a Second Language

Hamline University,

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Epigraph

*Tell me, I'll forget.
Show me, I'll remember.
Involve me, I'll understand.*

-Chinese Proverb

KEY TERMS

Additive Bilingualism: when a person's first language and culture is societally dominant and prestigious and is not in danger of being replaced by learning a second language.

Bilingualism: refers to learning two languages and being able to communicate with those languages in reading, speaking, listening and writing.

Comprehensible Input: language input that can be understood by listeners despite their not understanding all the words or structures (Krashen, 2006).

Language Immersion: a method of foreign language instruction that delivers a substantial portion of the school curriculum in the second language (L2) instead of treating it as a separate language (Potowski, 2007).

Language Majority: students speaking a majority language such as English in the United States or Japanese in Japan.

One-Way Immersion: All students are native speakers of the country's dominant language and are taught the regular school curriculum totally or partially in a foreign language (Potowski, 2007).

Phonemic Awareness: The child's awareness and ability to sequence, segment and manipulate sounds found within words at the phoneme level (Peregoy & Boyle, 2001).

Phonological Awareness: The child's ability to understand that oral language can be divided into smaller sound units, separated into syllables and manipulated as rhyming (Fortune & Menke, 2010).

Pinyin: transcription system representing the sounds of Mandarin using the Western (Roman) alphabet.

Two-Way Immersion (or dual immersion): A two-way immersion program has a linguistically heterogeneous student population with 50% language majority students and 50% language minority students who are dominant in their first language (Howard, Sugarman, Perdomo & Adger, 2005).

Subtractive Bilingualism: when a person's first language is a minority, non-prestigious language and is in danger of being replaced when learning a second language.

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CHAPTER ONE: INTRODUCTION

Language Immersion Schools

Language immersion is a category within bilingual education and has become a way to learn a foreign language by being immersed in it during the school day. The foreign language in the immersion program is not used within the community, but it becomes the immersion program's target language and culture (Johnson & Swain, 1997). The immersion program's target language is thus the second language or L2 and can be used as a medium of instruction in subjects such as math, science, language arts, and social studies in order to attain high proficiency. In this way, immersion schools are teaching students how to speak a new language while also teaching academic words and concepts (Johnson & Swain, 1997).

According to Johnson & Swain (1997), the immersion program originated in 1965 by a group of Canadian Anglophone parents in the French-speaking province of St. Lambert, Quebec. The St. Lambert parents wanted their children to have better bilingual education instead of French as a second language, so they consulted with bilingual scholars to create a bilingual program in their school. After lobbying the school board, the parents placed their English-speaking children in French classrooms all day, and the children started reading and writing in French from kindergarten through first grade. In second grade, literacy skills were introduced in the child's first language. This became

known as early total immersion and became a model for the rest of the world (Johnson & Swain, 1997). Canada's immersion education program spread throughout the world in the late 1970s and early 80s, and it has also spread to the Midwestern United States (Baker, 2011).

Johnson & Swain (1997) explained the main features of the prototypical immersion program as follows:

- 1) The L2 is a medium of instruction.
- 2) The immersion curriculum parallels the local first language (L1) curriculum.
- 3) Overt support exists for the L1.
- 4) The program aims for additive bilingualism, a situation in which a person's first language and culture is societally dominant and prestigious and is not in danger of being replaced by learning a second language.
- 5) Exposure to the L2 is largely confined to the classroom.
- 6) Students enter with similar (and limited) levels of L2 proficiency.
- 7) The teachers are bilingual.
- 8) The classroom culture is that of the local L1 community

(Johnson & Swain, 1997, pp. 6-8).

In looking at the eight features and comparing them to the program where I conducted my study of my nine-year-old son Aidan in his Chinese immersion program,

the only feature that is different is that Aidan's classmates have different levels of Chinese proficiency. All levels of L2 proficiency are present in his elementary school Chinese immersion program. On one end, some classmates have parents and relatives who speak Mandarin or Cantonese, and at the other extreme, some students, like Aidan, have no exposure to Chinese at home or in the community. The goal of this case study is to try to figure out why my nine-year-old son is having difficulty learning Mandarin Chinese and English in his Chinese immersion elementary school.

The popularity of learning Mandarin Chinese in Minnesota schools has grown 100% from 2013 to 2015 according to the Modern Language Association (as cited in Shao, 2015). As the perceived value of learning French among the influential English-speaking groups in Canada led to an increase socially, economically, and politically if they could attain a high proficiency of French (Pinter, 2011), there is a perceived value of some Minnesota parents that learning Mandarin will help their children attain jobs when they are older and lead to an increased awareness of different cultures.

Language Immersion Schools in Minnesota

In Minnesota, language immersion schools have increased in number and doubled since 2006. Minnesota is second to Utah in the number of immersion programs in the United States (see Appendix A, Center for Applied Linguistics, 2011). Many Minnesota elementary schools are trying to attract students and to prepare them for a global job market (Smith, 2013). To prepare young children for a global job market, languages are being offered in schools so students will have a competitive advantage later on in life.

Chinese, the most widely spoken language in the world (Infoplease, 2014), surpasses Spanish by more than double, with almost 2 billion speakers, and is a global leader in business. In 2005, Minnesota Governor Tim Pawlenty made it a statewide priority for students to learn Chinese (MPR News, 2009). He asked legislators to create and provide school districts with a common curriculum, materials, and assessments in Mandarin Chinese. In response, Minnesota passed a bill that allocated \$250,000 to Minnesota's Department of Education to explore bringing Mandarin language instruction to the public schools. In 2009, the Confucius Institute Headquarters in Beijing, China, gave almost \$500,000 to twelve Minnesota schools to teach Mandarin and culture. The University of Minnesota's Confucius Institute oversees the programs, and the money is used for textbooks, Chinese teachers, language materials, and funding cultural opportunities (MPR News, 2009).

On October 23, 2014, I attended the 7th Annual Minnesota Chinese Language Teachers Conference at the University of Minnesota East Bank Campus. It was run by the Confucius Institute and was a chance to learn about teaching and also a chance to network with other colleagues. The conference consisted of Chinese language teachers with a small group of Caucasian Mandarin-speaking teachers. I think I was the only non-Mandarin speaker at the event. Dr. Huajing Maske, Executive Director of the Confucius Institute at Kentucky University and faculty of the KYU Department of Curriculum and Instruction, was the keynote speaker and spoke about how to integrate the Chinese language and art into the Common Core curriculum (National Governors Association Center for Best Practices & Council of Chief State School Officers (2010). She talked at

length about reading *The Hungry Caterpillar* by Eric Carle (1994) and how to integrate math, science, and Chinese language into lessons. The second half of the lecture was about art and how to integrate more higher-level words in Chinese into discussions about Chinese art and culture.

I was able to chat with an American teacher who had worked at another local Chinese immersion school in Northeast Minneapolis. While we chatted, I told her about my son and his difficulty in learning Mandarin as well as English. She said that other immersion students also had difficulty with writing and reading in Chinese. The oral language was the easiest part for the younger students to master; however, the reading and writing were much more difficult and this is where she noticed students struggling. She said that Chinese immersion is so new in Minnesota that educators are still learning how to teach it. I told her that actually immersion has been around a long time in Canada and so it should not be that new. This caused her to ask why the Canadians do not come over to Minnesota to teach us how to teach it.

I had attended the conference in the hope of learning more about Chinese so I could help my son and also other parents in deciding what to do. My son is behind his peers in Chinese and English. He does not like to read or write in Chinese at home, however he does like to read in English. As parents of a fourth grader, this is not where we want Aidan to be as we look towards the reading and writing that our son will need to do in school.

Case Study of a Nine-Year-Old

This case study is designed to explore the literacy development of a nine-year-old boy in an elementary Mandarin additive immersion program in a suburban school in the Midwest. I am studying my fourth grade son, Aidan, in his Mandarin Chinese immersion school because I want to see how being immersed in Chinese has affected his literacy in Chinese and English and to better understand how Aidan sees himself as a language learner. I researched the immersion process to understand if there is a way to measure his progress in his academic work and his linguistic abilities because ever since kindergarten, I have been unsure if this is the right type of school for Aidan. He is a younger student because of a summer birthday, and until this year, he was a cautious, shy learner who did not talk much and took many years to build up his confidence. This is probably not an ideal personality for a language immersion student. Aidan was diagnosed with dyslexia in November 2014 and Attention Deficit Hyperactivity Disorder (ADHD) in June 2012, which may be affecting his language learning. It is beyond the scope of this study to address this other than to give as clear a description of Aidan as possible.

Aidan's father and I do not speak Mandarin at home or have any knowledge of the language. Aidan's Chinese teachers have consistently reported at conferences that he is inattentive and will not finish his work unless he is seated near the teacher. As parents, we have struggled to keep up with helping him with his daily homework in math, which is taught in Chinese, and Chinese language. When we go to the parent conferences twice a year, we have not been able to understand if he is meeting U.S. grade level expectations; what level he is at in Chinese, math, and science compared to his grade

level peers or what his Chinese proficiency is. Because we as L1 English parents have a hard time making sense of our child's academic progress in an immersion program, this case study may allow us to observe or notice literacy markers that may not be recorded by the teacher and bring in our son's opinion of his own language learning. This study may, in turn, be beneficial for other parents and teachers.

Background of Researcher

Looking back at my life, I see that I have a love of language and learning languages. My intrigue with foreign languages has followed me throughout my life. I tried to learn different languages starting at age 13 but had a difficult time trying to learn them as a separate class in junior high and high school. Even after three years of French and visiting France, I could not ask more than a simple question and could not communicate in French. During my senior year of high school, I took Spanish as an independent study, and it seemed to make more sense to me than French. Then, at the University of Minnesota, I tried Italian, and I immediately loved it and the outspoken Italian teachers who taught it. I knew that I had to go to Italy. In 1988, I enrolled in an Italian language school and lived in Italy for two months during the summer to learn how to speak Italian. This is one way to immerse oneself in a language and to learn how to speak and write it. After I came back and finished my Italian studies, I returned to Italy for one year, and ended up living there for seven. This love of language has led me to change careers mid-life to become a K-12 English as a Second Language (ESL) teacher in an inner city high school in the Upper Midwest.

I also have two children that are learning two different languages in addition to English. They have taken very different paths to learn them. While living in Italy for seven years and working at the Johns Hopkins University in Bologna, Italy, I had my first son, Alex. When Alex was a baby, I tried speaking to him in English while living in Italy but soon felt ridiculous. Alex's father and I both spoke Italian to him at home. His daycare providers and nursery school in Italy all spoke Italian, too, so Alex had minimal English spoken to him as a baby. We moved back to the U.S. when he was two and a half, and he was immersed in English while his father spoke Italian with him and I spoke Italian and English. During the first six months after moving back to the U.S., I tried to enroll Alex in a Montessori preschool program while looking for work, and I was told that he had to learn English better before they could take him. I finally found a child care center that understood and supported bilingualism and enrolled my child. After being immersed around other children who spoke English, my son quickly learned English, and they did not think that it was a problem.

My second son grew up in Hopkins, Minnesota, and learned some Spanish in preschool. I knew that I wanted him to learn a second language at a young age. Although our school district had just decreased foreign language classes in the elementary schools, they had started a Chinese immersion program. I heard that Mandarin was very difficult compared to other languages, so when our elementary school started the immersion Chinese program, I was wary but intrigued at the ease that the school said my son would learn this language and be fluent by his senior year of high school. The program told prospective parents that we needed to read 20 minutes a day in English to our child and

that the students would be fully immersed in Chinese from kindergarten through second grade. Starting in third grade, English would be introduced, and each year English language instruction would increase, as the Chinese would decrease, enabling the students to learn both languages (See figure 1).

The school advised us at the beginning of kindergarten to not teach our children how to read and write in English until the third grade. However, I heard that some parents were enrolling their children in summer school where they practiced reading and writing in English and were also teaching them at home. I assumed that they were as concerned as I was. Even though I have learned about second language theories in my ESL studies, I still wondered if Aidan's literacy learning from Chinese would transfer. If my son struggled in Chinese, how would he do in English? It was frustrating for both Aidan and me to not have him learning how to read and write in English along with other children his age. Hearing about other parents moving ahead with English made us question if we should be doing the same thing.

It is not always easy to determine if a student is struggling when learning two languages. In our school, some parents have voiced their concern about their child's progress as I have about mine, and there are no guidelines given to us.

Our journey in the Chinese immersion program has been interesting, and I wish there had been a pro and con informational sheet at our school before enrolling him. I heard many positive attributes, but nothing that really informed my husband and me about what our participation would be in the process. Being an ESL teacher, I was very intrigued with how an immersion program works. Even though I have studied the

acquisition of language, I still have doubts that immersing a child in a foreign language for the majority of his school day without home support in the L2 language will really create a fully proficient bilingual. This study has, therefore, made it possible for me to critically examine this issue.

Role of Researcher

I am a mother of two children ages nine and 19. I recognized that being a researcher and a mom would be a difficult task. During this study I was an observer of Aidan's literacy experiences at home and school and tried to understand how Aidan views himself as a language learner in Chinese and English. I was an interviewer and observer with his teachers to understand how they view him as a language learner. I tried to understand Aidan's literacy journey in Chinese and English, and how English and Mandarin Chinese emerged in a child that is becoming bilingual. It has been difficult trying to narrow down the questions surrounding his literacy and to try to understand his learning experience from his point of view and his teachers. Therefore, I tried to understand Aidan's interaction with his teachers and the cultural norms of his Chinese immersion school where he operates every day by asking him questions about how he perceives his language learning and experiences that I observed. The goal of this research was to rely on the views of all of the participants regarding Aidan's progress because of the complex nature of this study. My intent as a researcher was to interpret the meanings from the participants' views (Creswell, 2014).

As a mother, I have been trying to understand how he is learning and how it is defined in his Chinese immersion school. I am biased because I care about my son and

his progress. I brought in my personal values, biases, and history to this study, and tried to be aware of how they affected the results. While studying my son's progress, I had to be careful to not disclose information that at a later date may be unfavorable to Aidan. I obtained permission from the institutional review board (IRB) to protect his rights as a human participant and also obtained the right to interview his teachers for this research and observe in the school.

The goal of this research is to give parents a better understanding of how to gauge their child's learning in an immersion setting and what to look for in literacy development in an L2 language experience. This study may lead to understanding benchmarks of literacy development that go beyond test scores and aiding in more effective communicative language learning for struggling students.

Guiding Questions

This study was designed to explore my son in his acquisition of L2 Mandarin Chinese during his immersion experience in a Mandarin Chinese immersion school. There is limited research on Chinese immersion schools in Minnesota and comprehensive performance assessments of them because Chinese immersion has only recently been added to language immersion offerings for the community. Therefore, this study explored how a nine-year old, L1 English, elementary male student in fourth grade is acquiring Chinese and English literacy and how he sees himself as a language learner. The questions guiding this study are the following:

- How does Aidan perceive himself as a language learner?
- How do Aidan's teachers perceive him as a language learner?

- How do I perceive Aidan as a language learner?

Summary

In this chapter I focused on the background of language immersion programs as well as Chinese schools in Minnesota and how they originated. I also highlighted the renewed interest in acquiring a second language through full immersion in an elementary setting. I introduced the case study as a means of exploring literacy practices of a young boy in a Chinese immersion school. The goal of this study is to see how his language learning identity is shaped through social relationships and perceptions and to understand the impact this has on a young language learner.

Chapter Overviews

In Chapter One, I introduced my research by establishing the purpose, significance, and need for the study. The background of the researcher was briefly introduced, as were my roles, assumptions, and biases. Chapter Two provides a review of the literature relevant to the research questions. Chapter Three describes the methodology of the study, which includes descriptions of the participants and setting, data sources, data collection procedures, and limitations of validity. Chapter Four presents the results of summative and formative assessments, interview responses from Aidan and his teachers, and my literacy observations in the home and school. This study concludes with a discussion, potential application of the results, and suggestions for further research.

CHAPTER TWO: LITERATURE REVIEW

This study was designed to explore my son's acquisition of L2 Mandarin Chinese during his immersion experience in a Mandarin Chinese immersion school. There is limited research on Chinese immersion schools in Minnesota and limited comprehensive performance assessments because Chinese immersion has only recently been added to language immersion offerings for the community. Therefore, this study will explore how a nine-year-old, L1 English, elementary male student in fourth grade is acquiring Chinese and English literacy and how he sees himself as a language learner with dyslexia. During the course of the study, Aidan was diagnosed with dyslexia.

The subsequent literature review will explore two models of immersion, Chinese and English literacy, brain and language learning including the role of dyslexia, differences in teacher training pedagogy between the U.S. and China, and identity in the language learner. The chapter concludes with the research gap, guiding questions, and summary.

One-Way and Two-Way Immersion Programs

Looking back in history, support for bilingual programs has changed with immigration, political views and laws. As mentioned earlier, Minnesota has the second largest number of language immersion schools next to Utah. Minnesota Governor Tim Pawlenty made immersion schools a state priority in Minnesota after a trip to China, and immersion programs benefitted from state money to start their programs, along with

funds from the Confucius Institute in Beijing, China (MPR News, 2009). There are around ten two-way or dual immersion language schools and 55 one-way immersion language schools in Minnesota, according to Minnesota Advocates for Immersion Network (2014). The one-way program model targets language majority speakers with limited to no proficiency in the immersion language and has varying degrees of length during the day in second language instruction (Met & Livaccari, 2012). The two-way immersion model has a linguistically heterogeneous student population with 50% language majority students and 50% language minority students who are dominant in their first language (Ash, 2014; Howard, Sugarman, Perdomo & Adger, 2005). In this second model in Minnesota, two-way or dual immersion programs are mainly Spanish and English because of the larger population of Spanish speakers (Fortune, Miller & Tedick, 2011). The English-speaking and the target language groups of students are purposefully integrated with the goals of developing bilingual skills in both of the languages. Both groups of students, English speakers and native speakers of other languages, are provided with core academic instruction in both languages (Howard et al., 2005). The first language of each group is used in the classroom for academic instruction at certain points (Wesche, 2002). Two-way immersion programs have been successful for building additive bilingualism in majority and minority language speakers; however, it may not be easy in all languages to find a high percentage of native speakers. For example, it may be easier to create a two-way or dual immersion Chinese program in California because of the higher percentage of native Mandarin speakers than in Minnesota, where there may be fewer native Mandarin speakers.

Minnesota has many early total or one-way immersion programs where students start immersion in kindergarten and do not receive any instruction in English until second or third grade (Marty, 2014), as shown in figure 1.

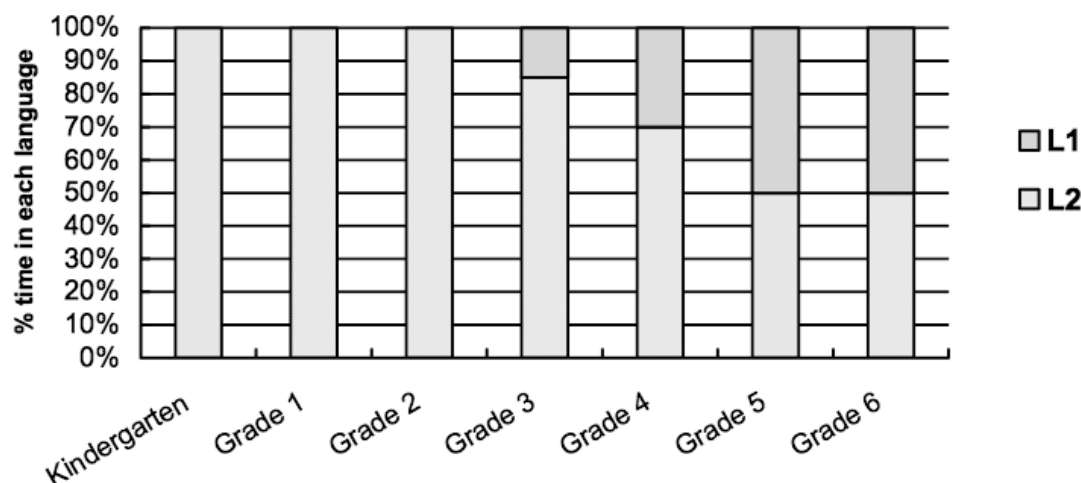


Figure 1. Schematic Description of Early Total Immersion Program. This figure illustrates the percentages of L1 and L2 that are taught in an early total immersion program (Genesee, 2005). From *Immersion Handbook*, p. 11, by F. Genesee, 2005. Tallinn: The Estonian Language Immersion Centre.

Aidan's program follows this paradigm. Students are introduced in grade 3 to instruction in English, and they have one hour of English in reading and writing. Each successive year English instruction is increased until junior high or middle school where English instruction will be for the majority of the day. The progression to junior high offers a Chinese language and culture class, social studies, and science taught in Chinese. The rest of the academic instruction is in English.

The common goal of all immersion students is to be moving toward bilingualism in the immersion language and the majority language of their community. Immersion programs serve to integrate language and academic instruction into content-based

language instruction, help students understand different cultures, and have functional proficiency in another language (Genesee, 2005, Met & Livaccari, 2012). Content-based instruction is the teaching of math, science, and social studies in the L2 and includes using discovery-and inquiry-based learning and reciprocal teaching where teachers model and scaffold students' questioning (Livaccari, 2012).

Chinese and English Literacy: an Overview

Learning to read and write in Chinese requires different cognitive demands than learning to read and write in English (Perfetti, Liu, & Tan, 2002). Recent research with dyslexic bilingual learners shows that a weakness in a learner's L1 can also be a similar difficulty in the learner's L2 across Romance languages (Chung & Ho, 2010). There has been less research in L2 learners who are dyslexic, especially for English L1 and Chinese L2 Chinese learners. Learning to read Chinese and English requires phonological processing, rapid naming, morphological awareness and visual orthographic processing in both languages and it is in these areas that there seem to be weaknesses with dyslexic bilingual learners (Chung & Ho, 2010).

As defined by McBride-Chang (1996), phonological processing is the ability to detect and discriminate between the sounds in a language such as phonemes, onset, rhymes, syllables, and words. Phonological processing is related to phonological awareness, phonological memory, and rapid naming, and these three processes seem to be interdependent (McGowan, n.d.). Poor phonological processing has been associated with dyslexia, and not having strong phonological processing skills is thought to contribute to poor reading. In addition to oral language, phonological processing has also

been associated with writing and is critical for reading in alphabetic as well as logographic languages, such as Chinese (McBride-Chang, 1996). While this study is not focusing on dyslexia, it is a factor and the linguistic limitations should be mentioned because of Aidan's diagnosis.

Students learning Chinese need to learn 3000-4000 characters to be a capable reader in Chinese, and a student learning Chinese should learn to recognize over 470 different characters by the end of their first year in school (Boon, 2010; Huang & Hanley, 1995). Learning Chinese requires a lot of memorization in learning radicals and understanding how to build new meanings out of the characters. It also involves training in the ability to pronounce, comprehend, read, and write but young children learn Chinese by focusing on what the character looks like before learning the phonetic transcription (Holm & Dodd, 1996). A Chinese radical is composed of a logograph in the shape of a box. About 90% of Chinese characters are ideo-phonetic compounds or derived from drawings of objects and combined with an existing phonetic form (Xing, 2006). The radical refers to the semantic component of each character and is derived from pictographs (Xing, 2006). Chinese semantic radicals usually are located at the top or on the left of the square area that is occupied by the character, and phonological compounds are usually located on the bottom or right side of the square. If Chinese readers know these principles, then they can analyze characters that they have never encountered before and look for the semantic and phonological parts within characters (Xing, 2006). Children need to detect differences in the arcs, curves, and lines that are similar to alphabetic letters (Wolf, 2007).

Morphological awareness, the understanding of morphemes (the smallest unit of meaning) and how words are made, is important in Chinese as well as English (McBride-Chang, Shu, Zhou, Wat, & Wagner, 2003). In English, morphemes can be composed of two morphemes as in *socks*. The first morpheme is *sock* and the second morpheme is the *s* to show a plural (McBride-Chang et al., 2003). However in Chinese, radical awareness involves noticing the morphemic structure of characters. Ideo-phonetic compounds are a type of character and they contain two parts. One part includes a semantic radical, which gives clues to the meaning. The second part is phonological, which helps Chinese readers understand how to pronounce the character.

A study by Tong, McBride-Chang, Shu and Wong (2009) looked at three core literacy skills in young Chinese children: word recognition, word dictation (spelling) in Chinese, and reading comprehension. In this 1-year longitudinal study of 196 Hong Kong Chinese children in their third year of kindergarten, Tong et al. (2009) studied skills that they thought were important for Chinese word reading development. The hypothesis was that morphological and orthographic skills would both be important for learning to read and write in Chinese and that phonological awareness would be a less significant role. The scholars concluded that speeded-naming of numbers, visual-orthographic skills, phonological awareness, and morphological awareness are all important skills in Chinese literacy. Morphological awareness is important in learning Chinese because many meanings of Chinese words can be inferred from their morphemes. If learners of Chinese can recognize single characters in multi-character words, then they can understand the gist of the meaning.

For example, a two-character word 农夫 (farmer) was learned as a square-shaped image directly mapped onto corresponding speech sounds via rote memorization.

However, some children could not read the individual characters which mean 农 (agriculture) and 夫 (man). This is very important when trying to figure out the context of a sentence or to figure out more complex words in Chinese that may be made up of more than two characters. For instance, the four-character word 茉莉花茶 (jasmine tea) may be predictable from just the single morpheme 茶 (tea) (Tong et al., 2009, p. 445-446).

In an earlier study, Huang and Hanley (1995) studied the performance of 137 8-year-old primary school children from Britain, Hong Kong, and Taiwan on phonological awareness, visual skills, and reading ability. They found that phonological awareness was not as significant a factor in the reading ability in L1 Chinese in Chinese children but was a more important factor in reading ability in L1 English in British children. In addition, they found that phonological awareness is an important factor in reading differences in children who read an alphabetic script. Huang and Hanley (1995) found that the most powerful predictor in reading Chinese with the Taiwanese and Hong Kong children was their performance of visual skills. The memory test (visual paired associates [VPA]), which has subjects learning which colors go with each of six abstract drawings, is a sub-test of the Wechsler Memory Scale-Revised (Wechsler, 1974). This VPA test was found to be a stronger predictor than the perceptual test (visual form discrimination [VFD]). The VFD was a short assessment, which consisted of 16 items and each item contained three figures. Subjects tried to match the target with its copy. The ability to learn unfamiliar figures that was tested in the visual paired associates test seemed to be closest

to learning Chinese characters. Therefore, it was concluded that a child with an excellent visual memory would have an advantage when learning Chinese characters. With the English L1 children, it was found that the visual skills were much less important when learning to read an alphabetic script than the logographic script for Chinese children.

Phonemic awareness is a very important early skill to become a good reader in English (Cunningham, 2007). Students learn that letters have a corresponding sound; however, the name of a letter is not always the sound it makes. For example, Wolf (2007) points out that “the letter *r* does not represent *are*; rather, it represents the sound of the English phoneme /r/, pronounced *ruh*” (p. 97).

Learning the difference between the written letters and the sound they make is a complex process. Preschool and early elementary children start inventive spelling in alphabetic writing systems, and research also suggests that logographic (Chinese) writing systems use “invented spelling” as young children learn to write (Peregoy & Boyle, 2001). Children’s writing in an alphabetic language in the inventive writing stage takes the sound of a letter or character and uses it for a different letter or character when spelling out a word. For example, *YN* is used as an inventive spelling for the word *wine* and *win*. Children in this writing stage use the letter name *Y* as the *wuh* sound and the letter name *N* as an *in* sound (Wolf, 2007).

Rapid naming, also called rapid automatized naming (RAN), goes across all languages, including Chinese. RAN is a good prediction of early reading ability (Tong et al., 2009). RAN tasks are when children are asked to orally name numbers, letters, colors, or objects, from left to right, and their speed of naming these familiar objects is measured

(Wolf, 2007). Denckla and Rudel (1976) discovered that RAN tasks are one of the best predictors of reading performance across all languages because of the automaticity of the naming process (as cited in Wolf, 2007). These tasks are similar to what the brain does when someone is reading. The brain needs to rapidly decode to understand and process incoming information when reading to make sense of the text (Wolf, 2007). RAN has been normed for children as young as five years old, and this is on the assumption that most children in the United States know colors and common objects, which are presented on rapid naming tests (Norton & Wolf, 2012). Measures of phonological awareness and naming-speed processes are the best predictors of reading because they can be tested in children who have not yet learned how to read.

In short, even though the Chinese and English languages are very different, scholars (Chung & Ho, 2010; Norton & Wolf, 2012; Tong et al., 2000) have found that RAN is an important prediction of reading ability in both English and Chinese. Phonologic strategies are important in both languages; however, Chinese readers use more visual skills because of the logographic writing system.

The Brain and Language Learning

Advanced technology helps to study and understand the brain and how it functions. Scientists now know that the brain begins its first “pruning” stage around the age of four by getting rid of excess connections that are not being utilized (Kennedy, 2006). Then around age five or six there is strong brain growth. This brain growth versus body growth happens about every four years in people until around the age of 29 when the brain is fully functional (Kennedy, 2006). This research on brain pruning is important

because language immersion proponents say this is why children should learn a second language earlier rather than later.

Brain processing is important in language learning, and research indicates that there is a positive correlation with cognitive skill development in fully proficient bilinguals, specifically in the study of attention and inhibition, and childhood bilingualism seems to accelerate this (Bialystok, 2001). Bialystok (2001) found that bilingual children tend to outperform monolinguals on non-verbal tasks involving executive function. According to Brown (2005) executive functions are made of many cognitive processes that work together in six different clusters: activation, focus, effort, emotion, memory, and action. These clusters incorporate complex problem solving, including tolerating frustration, and using self-talk to control one's actions and future behavior. They also play a role in getting started on, focusing, and completing tasks (Brown, 2005). Because ADHD affects executive functioning of the brain, the executive functioning may be tripped up and impede certain processes. Learning disabilities are problems that are neurologically based and these can interfere with math, reading, writing, and also with executive processing skills such as organization, time planning, abstract reasoning, attention and long/short term memory (Learning Disabilities of California and UC Davis, 2001-2002). Even though this study is not about dyslexia and ADHD, these factors are present and are a dynamic in his language learning.

In a 2010 study by Csizér, Kormos and Sarkadi on the dynamics of dyslexic language learners in Hungary, 15 students were surveyed about their motivation and attitudes about learning a second language. The students were on average 18 years old,

and 5 were female and 10 were male. They were interviewed and asked 15 questions. The questions focused on the following topics: 1) the participant's problems in everyday life caused by their dyslexia, 2) their difficulties in the native language resulting from their dyslexia, 3) their language learning experiences, 4) their language learning difficulties, 5) their coping strategies, and 6) their motivational characteristics (Czizér, Kormos & Sarkadi, 2010). The conclusions drawn from the interview data showed that both the attitudes towards the students' language learning and the motivated behavior changed and was seen as dynamic and not a stable factor. This was thought to be due to the learners' immediate environments as well as the classroom environments that may have affected the students' learning goals, attitudes, and their motivated behavior. These students had goals, such as passing language exams or getting a better job with an additional language, and these goals were strengthened by expectations of family members and friends. The challenges that the students faced because of dyslexia tended to lessen their intrinsic motivation in learning English. However, the same students showed favorable attitudes towards learning other languages (e.g., Italian, Spanish, Russian) because the spelling and pronunciation were more predictable for these students in these languages rather than in English. The data also revealed that many of the participants had much difficulty learning another language and developed negative self-concepts and attitudes towards language learning. The students said that their motivation was affected by their teachers' in-class behavior, how they taught, and their attitudes towards dyslexia.

Research has shown that successful teacher strategies created environments that have a positive feeling in the classroom and happy, comfortable relationships between the students and teachers (Anderson, Stevens, Prawat & Nickerson, 1987). Because of the difficulty that the Hungarian dyslexic students had with their language learning, this seems to be an essential element in helping them with their motivation and attitude. The Hungarian students' difficulty with language would seem to be helped by having a teacher who understands dyslexia and can facilitate accommodations for dyslexic learners.

Because of the cultural differences between the Chinese and U.S. teachers that will be talked about in the next section, there could be many difficulties between the Chinese teachers, parents and students when especially dealing with a student who needs additional accommodations in language learning.

Chinese and U.S. Teachers: A Difference

Language teaching is a specific skill that not every teacher has in his or her teaching repertoire. In the Chinese immersion programs in the U.S., a shortage of Chinese teachers for Chinese immersion schools has resulted in Chinese teachers being recruited to come to the United States to teach in K-12 education or recruiting Chinese people living in the U.S. who may have a degree, but not necessarily one in teaching language (Xu, 2012). Compared to the U.S. educational system, there is a very different pedagogy for teachers in China, and the Chinese teachers are not always aware of what they will encounter in the U.S. Some of these challenges are teaching style, working with special needs students, homework, and communication with parents (Xu, 2012).

Xu's (2012) survey of seven native speakers of Chinese who taught in China or Taiwan and are now teaching in U.S. schools helped to highlight certain issues. The first issue was the teaching approach. The Chinese teachers noted that they were used to a teacher-oriented approach and not student-centered learning that tends to be more prevalent in the U.S. A teacher who taught in Taiwan stated that she was not expected to think up interesting instructional activities and games for students in Taiwan, but felt that it was an expectation for students to be entertained in the U.S. (Xu, 2012). A second challenge was not having enough time to help students with ADHD. The teachers said that these students require a lot of teacher attention to get back on task. These students are frequently moving and talking, and the teachers spend extra time tutoring these students. A third cultural difference was student behavior and U.S. students who may challenge teachers and speak their mind. China and Taiwan have a more hierarchical culture, and students tend to accept class rules and teachers as authorities. The Chinese teachers in the study were frustrated by the number of disruptive behaviors that the U.S. students exhibited as seen in the frequent asking for permission to use the bathroom (Xu, 2012). In China and Taiwan there is an expectation from parents and teachers to spend more time on homework and less time on extracurricular activities than in the U.S. Chinese teachers who are new to the U.S. may think that American students are unmotivated because of less time spent on homework. In the United States, in contrast, it is generally thought that students are more "well-rounded" when they are good at outside activities from school. However, the last major issue was the parents. American parents e-mailed the Chinese teachers a lot and wanted information about how their child was

learning. The Chinese and Taiwanese parents did not need as much individual time and took the teacher's side when issues arose, whereas the American parents tended to take their children's side in disputes (Xu, 2012).

To highlight the cultural difference in Aidan's program, I remember when Aidan was in kindergarten, all of the parents and students knew how to say "no good" or *bù hǎo* in Chinese, 不好, because it was used so much by the Chinese teachers.

Ironically, the 9th grade students I teach were drawing one morning while we read in class about a Nigerian woman who came to the U.S. and was explaining different cultural cues she encountered. As I circulated around the room, students were explaining their drawings to me. Two drawings were about teachers and students. They drew an American teacher saying "good job," which they said was a typical response from teachers. This highlights to me the cultural difference between the Chinese and American teachers. As described earlier, the Chinese teachers had a very different cultural view about how American students should act compared to how they were brought up in China. Hard work, drill, and repetition are traits that are practiced in China whereas being well-rounded and able to do many different things outside of school are very important to most American parents in addition to school work.

These are some of the many cultural issues that can arise with native Chinese teachers as well as with the American students who are learning a very different language and culture. This cultural disconnect between teacher, student, and parents can result in miscommunication and a feeling that the student is problematic for the teacher. Students with learning disabilities such as ADHD and dyslexia may be sensitive to outside

influences when learning a language because various cognitive functions may be impaired due to ADHD and dyslexia. Therefore teachers who understand learning disabilities (LD) and effective instructional strategies are very important for LD students to learn a second language.

Identity and the Language Learner

Identity formation is a very important factor in language acquisition and involves the learner negotiating between himself and his environment (Hawkins, 2005). Language learners construct a view of themselves within the classroom, at home, with friends and communicating with teachers. Classroom identities are always being negotiated through social interaction and children can negotiate an identity that helps them to be successful or unsuccessful in school (Hawkins, 2005). Studies such as Toohey (2000) and Hawkins (2005) have looked at young children and how they develop literacy with classroom, peers and home influences. Hawkins' (2005) study showed that students who construct identities as learners with others, such as teachers or students, gain access to certain language and literacy that they need to master to be a successful learner in school. However, the resources that are available to students outside of the classroom and that they use to construct identities outside of school may not yield the same results within the school environment. This is very true in a Chinese immersion setting for Aidan. Outside of school Aidan does not have any Chinese language support. During school he is quiet and does not ask for support from his Chinese or English teachers. He is also very quiet during class instruction, yet will work with a small group of students during work or

group time. Because of his personality, he may not get as much Chinese language reinforcement as an extroverted student.

In Hawkin's research (2005) she talks about Toohey's (2000) community of practice framework in her ethnographic study of English as a Second Language Learners from grades 1-3. Toohey analyzed interactions in the classroom and found that there was an underlying message about identity and social positioning within networks of power, language, and literacy development. Knowingly or unknowingly, teachers' and staff's cultural models of schooling are transmitted through their interactions with students, as with the curriculum design, pedagogy, and materials (Toohey, 2000 as cited in Hawkins, 2005).

This study highlights the importance of how children's histories, resources and understanding help to shape their school identities (Hawkins, 2005). Children spend a large part of their day at school, and teachers, students, and the school environment play a large part in a child's early formative years. This is important to this case study in trying to understand how Aidan perceives himself as a language learner and also how his teacher perceives him as a language learner, playing a role in his success or failure as a language learner.

Research Gap

Immersion schools have been in Hong Kong, Singapore, and China for many years, and scholars have focused on L1 Chinese learners with English as an L2. When learning in a Chinese immersion school in the U.S., one cannot ignore the different cultures between East and West. One may wonder how the differences in culture may

affect a teacher's perceptions of his or her students as language learners and how that may influence a student's perception of himself or herself as a language learner.

However, there appears to be limited research on L1 English elementary school age students who are immersed in L2 Chinese language learning. There is much research about second language learning, English language learners, and Chinese heritage learners, yet nothing specifically on young, L1 English children learning Chinese in an immersion setting in the U.S. and how they perceive themselves as learners. These students may need to negotiate for themselves in the classroom with cultural differences that are very new to them.

Guiding Questions

This study was designed to explore my son's acquisition of L2 Mandarin Chinese and English literacy during his experience in a Mandarin Chinese immersion school. There is limited research on Chinese immersion schools in Minnesota and how to gauge student learning because Chinese immersion has only recently been added to language immersion offerings for the community. Therefore, this study will explore how a nine-year old, L1 English, elementary male student in fourth grade is acquiring Chinese and English literacy and how he sees himself as a language learner. The questions guiding this study are the following:

- How does Aidan see himself as a language learner?
- How do Aidan's teachers perceive him as a language learner?
- How do I perceive Aidan as a language learner?

Summary

This chapter has covered topics related to early immersion and bilingualism. First, there was an introduction to two immersion models: one-way and two-way programs. Second, an overview of Chinese and English literacy was covered. Third, the brain and how it relates to language learning was discussed. Fourth, cultural differences were examined regarding Chinese teachers in the U.S. Fifth, identity formation and the language learner was considered in understanding how identities are formed when learning another language. Finally I addressed the gap in the research, how I address the gap, my research questions and summary. In the next chapter, I outline the methodology that I used to conduct my case study.

CHAPTER THREE: METHODS

Overview and Research Questions

This study was designed to explore my son's acquisition of L2 Mandarin Chinese literacy during his immersion experience in a Mandarin Chinese immersion school. I wanted to see how being immersed in Chinese has affected his literacy in Chinese and English and to better understand how Aidan sees himself as a language learner. There is limited research on Chinese immersion schools in Minnesota and comprehensive performance assessments because Chinese immersion has only recently been added to language immersion offerings for the community. Therefore, this study explored how a nine-year-old, L1 English, elementary male student in fourth grade is acquiring Chinese and English literacy and how he sees himself as a language learner. The questions guiding this study are the following:

- How does Aidan perceive himself as a language learner?
- How do Aidan's teachers perceive him as a language learner?
- How do I perceive Aidan as a language learner?

This chapter presents the methodologies used for this case study. The description of the research paradigm is given along with the particular method and reasons for using it. Second, the research method is identified and explained in relation to the paradigm.

Third, the setting and participants are described in the study. Fourth, the research instruments and data analysis techniques appropriate for the study are described in relation to the method. Fifth, the limitations of validity and reliability are discussed. Lastly, the chapter ends with ethics and a conclusion.

Research Paradigm

This case study has a constructivist view or perspective. According to Crotty & Mertens (as cited in Cresswell, 2014), social constructivism is a perspective and an approach to qualitative research in which people try to understand the world that they are living in. They develop subjective meanings about their experiences. The researcher tries to look at the complexity of views instead of narrow meanings in a few ideas. The goal of the research is to rely on the participants' views as these subjective meanings are negotiated socially and historically. Researchers can have broad questions that are generated by interactions among individuals. Researchers also recognize that their background shapes their interpretations, and they must interpret research with this awareness in mind. This is why qualitative research is also known as interpretive research (Cresswell, 2014).

When studying factors that affect linguistic gains, Magnan and Lafford (2012) list some ways to gather personal data such as personal diaries, written surveys, in-person interviews, and direct observations. This case study used educational ethnography (Spradley, 1979) as the research method to document Aidan's home and school experiences in literacy practices to understand how he is learning Chinese and English

and how his perception is being formed as a language learner. Ethnography was chosen as an approach because it is grounded in cultural anthropology and tries to describe cultural practices in everyday life from the participant's perspective. The ethnographer enters a site (home or school) and looks for patterns of activity that describe cultural practices in everyday life (Green & Bloome, 1997; Li, 2004; Spindler & Spindler, 1982). By taking the part of the ethnographer, I looked for patterns of activity in our home and Aidan's school that provided rich qualitative descriptive data about the contexts, activities, and beliefs concerning Aidan. Based on Dagenais, Day and Toohey (2006) and Wolcott's (1994) methods, observing both the home and school environments showed different social worlds to help better understand Aidan's learning in different contexts and points of view. Using ethnographic observations helped to see how the literacy practices of class and home factor into Aidan's language learning and how he navigates the different cultural expectations.

Using case study ethnographic methodology and qualitative analysis allowed me to go more in depth and provided insights into my son's immersion experience. As I am the mother of the participant, I strove to be objective and not become too emotional since it is my son and his progress. I attempted to look at this from a scholarly point of view to give parents and educators the least biased information possible.

Data Collection

Participants and Setting

The participants of this study were Aidan, Aidan's English and Chinese teachers, and myself. Aidan is a fourth grade boy in a Chinese immersion school who comes from

an English-speaking home. He was a monolingual English speaker when he started in the Chinese immersion program in kindergarten. Aidan's fourth grade Chinese teacher began teaching in 2012. He completed his Bachelor of Arts in Applied Psychology in China and studied at the University of Minnesota where he received his Master's degree. Aidan's fourth grade English teacher has taught in the district for many years and has a teaching license and Master's degree in education.

The settings for the study were a Mandarin Chinese immersion public school and our home. One part of the school is an all-English, public elementary school, and the other is the public elementary Chinese immersion school. Both schools share the school building. The Chinese immersion program started in 2007 and has expanded one grade per year, building the curriculum as it moves forward. It is a total immersion program in kindergarten through second grade, except for lunch, recess, art, music, and physical education. At Aidan's school, the students are taught the district curriculum standards with instructional materials in Mandarin Chinese. Online language tools that support the daily instruction are used at home. Students learn to read and write in Mandarin first, and then English language arts are introduced in third grade for one hour a day and increase each year.

Data Collection Technique 1: Classroom Observations

My fieldwork consisted of one observation of Aidan in each of his English and Chinese classrooms. While observing, I described and noted what the literacy environment looked like, classroom literacy activities that Aidan participated in, and interactions with his teachers and peers (Spradley, 1979).

Data Collection Technique 2: Teacher Interviews

The semi-structured interview with Aidan's Chinese and English teachers (found in Appendices B - C) were face-to-face with open-ended questions that were few in number to elicit each teacher's views and opinions about Aidan's learning of Chinese and how they viewed him as a language learner (Magnan & Lafford, 2012). They were developed with help from my advisors and were chosen because they provided a way to generate rich ideas, gain insights into values and perceptions, and allow the respondents to express ideas that I may not have considered. The questions addressed from the teachers' perspectives how the student was viewed as a language learner, his ability understanding Chinese and English, and his relationships with teachers and peers at school.

Data Collection Technique 3: Student Interview

The semi-structured interview questions with Aidan in Appendix D discussed how he saw himself as a language learner, who his friends were, literacy experiences in and out of school, and his perceptions of reading and learning in Chinese and English (Magnan & Lafford, 2012).

Data Collection Technique 4: Bilingual Self Perception Survey

The Bilingual Self-Perception Survey in Appendix E was adapted from Caldas (2006), who studied the self-perception of his bilingual children. It included seven open-ended questions about school and being bilingual. This provided additional information about how Aidan felt about his identity. This survey was considered relevant because even though Aidan did not live in a bilingual environment, he spends a large part of his

day in an immersion setting using a language that is not his L1. I read the survey to him and noted his answers and explained questions when he did not understand the question fully. The responses in this survey were expected to elicit how he feels when speaking Chinese at a nine-year old level.

Data Collection Technique 5: Home Journal Observations

I wrote journal entries during the research study to help me remember things that I might otherwise forget or discount as unimportant at home and as observations of language learning (Wolcott, 1994). I observed and noted the literacy practices two to three times a week that Aidan practiced at home. Observing who Aidan interacted with at home, what language was used, and what he chose to work on in English and Chinese helped to form a more accurate picture about what resources he had available to him outside of school and what he wanted to work on in language learning. This helped to give insight about his life and to look at him across diverse contexts to get a more comprehensive and integrated picture (Hawkins, 2005). It also served as a method of remembering details across the span of five weeks when analyzing the data.

Data Collection Technique 6: Formative and Summative Assessments

The Chinese proficiency test is called the Youth Chinese Test (Confucius Institute Headquarters, 2013). Students are tested online and it is administered by the Confucius Institute/Hanban and the University of Minnesota. The proficiency levels are determined by using combined scores from the Youth Chinese Test. It is designed for non-native speakers who are at an elementary-intermediate level in Chinese language. It is a

summative test that is given once a year in the spring and the scores are sent out to parents in the fall. This data helped me to understand how he was progressing in Chinese.

Procedure

After the Human Subjects review approval was obtained through Hamline, a Request for Research Proposal was sent to the district to obtain permission to conduct the study at the Chinese immersion school. After approval of the research proposal, I spoke with the principal of the school and he sent out an e-mail to the teachers after which I sent letters of consent to the English and Chinese teachers (found in Appendices G-H) to sign for the case study. I collected the quantitative and qualitative data material over a five-week period from October 6, 2014 – November 13, 2014. I looked for underlying patterns to see how Aidan was learning a second language. My research aim was to use conversation, discussion, and questioning of a student and teacher to better understand the student's progress in literacy.

The qualitative data that I collected and analyzed by journaling took the form of field notes of Aidan's language development. I observed and took notes on the following: 1) classroom observations, 2) teacher interviews with Aidan's Chinese and English teachers, 3) a student interview, 4) a bilingual-self perception survey, and 5) home journal observations.

Data was collected by two audio-recorded sessions of one-on-one interviews with Aidan's Chinese and English teachers. The in-person interviews lasted no more than 30 minutes and were finished when the interviewees had nothing more to say. The teachers were audio-recorded in their classrooms using an audio app for an iPhone called Audio

Memos. Aidan's interviews were conducted one-on-one, were transcribed by hand to seem natural like a conversation, and were quickly adapted to meet the needs of a nine-year-old child who was getting bored with the repetitive questions. The journal notes were written on a laptop.

Data Analysis

The first step in data analysis was to get to know my data by reading and re-reading it and to understand my impressions of it. I wanted to make sure that my transcription was accurate for the classroom observations and that I was able to accurately write down everything that was said. I did this by listening to the audio recordings of the interviews, looking over my notes, and taking detailed notes of the recordings. I attempted to identify what I saw as critical components. I observed a few factors at work in a particular situation and systematically described the relationships between them. For beginning researchers, such as myself, Wolcott (1994) suggests being concerned with being right in analysis instead of going as far as one can. I did this by making sure that my transcript and description was as accurate as possible. I listened closely and observed as well as possible to ensure accuracy. Next, I described, sorted, and labeled the data to find relationships within it and common themes that emerged. To help categorize the observations and interviews, I identified relevant themes by going over the research questions and seeing which data fit within each research question. Once I labeled all relevant themes and responses to questions, I then looked for emergent categories or themes that emerged from the data. After all of the categories were

identified and patterns and connections started to emerge, then relationships came to light as two or more themes occurred together consistently in the data.

Limitations of Validity and Reliability

Telling if a conclusion we draw is valid is not easy to determine in studies such as mine because there are so many variables that may affect one another. My goal was to have enough good evidence to be able to look at it repeatedly and with a critical eye (Johnstone, 2000). Having enough evidence is important for re-interpretations, yet achieving balance in how the evidence is portrayed can help in achieving a valid argument.

Some limitations of validity may be found with the teacher interview (Newton, 2010). A successful interview rests on the assumptions that the interviewees are honest in their opinions and the interviews are accurately reflected. A particular weakness for the face-to-face interview method with my son's teachers that may inhibit or influence their answers might be in the power dynamic between the parent and teacher. Another threat to the validity of a semi-structured interview is trying to not ask leading questions and having preconceived ideas about what the interviewee will say (Newton, 2010). For this study, I attempted to design my questions to avoid asking leading questions and to let the interviewees lead the discussion with their thoughts.

Knowing my research participant intimately may be seen as too narrow or biased; however, influential work in sociolinguistics has been done by people who knew their subjects intimately (Johnstone, 2000). One example is the German linguist Werner Leopold (Hakuta, 1989), who conducted a case study on his young daughter by recording

her utterances in German and English from when she was eight weeks old until she was eight. Most of his observations were in her first two years. He meticulously recorded her utterances and transcribed them. His diary approach covered many different aspects of her speech from the development of her vocabulary to her sound system. He did not restrict himself to just one aspect of her linguistic abilities (Hakuta, 1989). Having my son be my participant is difficult because of the exposed nature that this study is taking; however, it is with great care and concern that I have chosen to do it.

Aidan is not speaking Chinese at home and we do not know Chinese to be able to help him with homework and additional reading support, nor can I assess his ability in Chinese. An awareness of the potential problems of such a study can help increase validity. Researching a child is complex because things are always changing as children grow and mature. Even a study this short has many variables that are constantly changing.

Ethics

This study employed the following safeguards to protect informant's rights:

1. Research objectives were shared with informants.
2. Written permission was obtained and participants were informed that they could withdraw from this study at any time.
3. Human Subjects Research Long Form was approved by Hamline's Human Subjects Research Subcommittee before data collection could begin.
4. Transcripts were taken verbatim and special care was taken in transcribing them as accurately as possible.

5. Anonymity of informants was discussed at capstone meetings to ensure the privacy of teachers and the school. Since I am studying my son, how to protect him was discussed.
6. Recorded data was kept in password-protected files and deleted at the end of this study.

Conclusion

In summary, I described the qualitative methods and collection techniques for qualitative and quantitative data that I used to answer the research questions of how Aidan, his teachers, and I perceive him as a language learner. My aim is to analyze all types of data to ensure both validity and reliability and to provide answers to my research questions. Chapter Four will show the results of his formative and summative assessments, discuss the interview answers, and summarize the data.

CHAPTER FOUR: RESULTS

Overview and Research Question

This study was designed to explore my son's acquisition of L2 Mandarin Chinese literacy while a student at a Mandarin Chinese immersion school. I wanted to investigate how being immersed in Chinese has affected his literacy in Chinese and English and to better understand how Aidan sees himself as a language learner. There is limited research and comprehensive performance assessments on Chinese immersion schools in Minnesota because Chinese immersion has only recently been added to language immersion offerings for the community. Therefore, this study explores how a nine-year-old, L1 English, elementary male student in fourth grade is acquiring Chinese literacy and how he sees himself as a language learner. Through the collection of these data, I sought to find the answer to the following questions:

- How does Aidan perceive himself as a language learner?
- How do Aidan's teachers perceive him as a language learner?
- How do I perceive Aidan as a language learner?

Learning a new language in an immersion setting is more than just learning how to read, write, and speak it. A student is also learning a new culture and figuring out how the language is interpreted by others. Being taught by teachers from another country

poses a challenge for students as well as parents in navigating the learning process for their children.

As described in Chapter Three, data was collected over a five-week period from October 6, 2014 – November 13, 2014. I observed in the English and Chinese classrooms once, interviewed Aidan and his teachers, and took field notes about language use and behaviors that seemed to reflect Aidan's attitude about learning Chinese and English. I also tried to observe if and how the teachers' and parents' attitudes affected the participant and his language learning. A complicating factor in this study surfaced during the data collection period. We found that Aidan is dyslexic along with his prior ADHD diagnosis and we are currently trying to understand how that affects his language learning.

Data Collection and Results Obtained

Five different tools were used to collect data: classroom observations, two teacher interviews, a student interview, a bilingual self-perception survey, and home journal observations, which were different from the formative and summative assessments done in school. I attempted to gather data that might show how Aidan is as a language learner, from his perspective and his teachers. Gaining a better understanding as to how his Chinese immersion school values progress is also important in seeing how his teachers view him as a language learner.

Aidan's Chinese Classroom: Observation and Teacher Interview

Aidan's fourth grade Chinese teacher began teaching in 2012. He completed his

Bachelor of Arts in Applied Psychology in China and studied at the University of Minnesota where he received his Master's degree. Aidan's teacher does not have a classroom assistant, but a visiting Chinese teacher comes in a couple of times a week to help. Students in Aidan's class seem to be white from middle class backgrounds with English L1. Out of the 23 students in his class, 13 are girls and 10 are boys. Seventeen students seem to be white and six students of Asian descent. Table 1 shows a weekly schedule of Aidan's classes to show how his day is organized.

Table 1

A weekly schedule of Aidan's classes

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Reading	Reading	Reading	Reading	Reading
9:10					
9:20		English	Math	English	
9:30					
9:40					
9:50					
10:00					
10:10	Math				
10:20					
10:30		English	English	Music	
10:40	Music				
10:50	Math	Math			
11:00					
11:10					
11:20					
11:30					
11:40	Recess	Recess	Recess	Recess	
11:50					
12:00					
12:10	Lunch	Lunch	Lunch	Lunch	
12:20					
12:30					
12:40	Math	Reading	Library	Art(~1:35)	Math
12:50					
1:00					
1:10			Reading		
1:20					
1:30					
1:40	Reading	Math		Reading	Reading
1:50					
2:00					
2:10					
2:20					
2:30	Science	Social Studies	Science	Social Studies	Health
2:40					
2:50					
3:00					
3:10					
3:20					

Chinese characters on green paper hang from the ceiling in his class. There is a map of the People's Republic of China above the reading corner with pillows on the carpet. There are 24 desks around the room and two teacher's desks. There is one reading table for small reading groups and a sink at the back wall. Behind the reading table are students' note cards with characters and pictures on them. On another wall it looks like vocabulary words because there are note cards with characters and pictures on them. The room has many Chinese characters. On an opposite wall there are four pictures of a student, so I assume it must be the student's week to share. I can't read the Chinese above it, but the pictures from home are usually shared in elementary classrooms when students talk about themselves. The room doesn't have any exterior windows because it is an interior classroom, but it seems large and spacious.

For the first ten minutes in the morning, Aidan's Chinese teacher has the students writing a sentence or short story about the new vocabulary words. Aidan has not been doing that in class. His teacher said that he asks Aidan to review his vocabulary words and he is not sure if Aidan does that or not. When I asked him what Aidan did do at that time, he was not sure.

When I asked his teacher how he saw Aidan as a language learner, his Chinese teacher said that is a difficult question. He said Aidan is very good at speaking. He thinks Aidan is an enthusiastic learner, but it is hard for him to write, listen, and spell. I noticed that the class had iPads at the back of the room, and I asked what they used them for. He replied that they would be using the iPads to talk to Chinese people later on in the year. When asked about Aidan's ability to understand Chinese when reading, writing, and

speaking, he replied that Aidan's speaking is very good. He talked with him during a Chinese school performance and Aidan was telling him things in Chinese. The Chinese teacher was very surprised that his speaking was so good and shared the following:

His listening is, he finds it hard to follow instruction or general ideas to express.

His writing is difficult for him. Aidan got one character correct last week and zero characters correct this week on the spelling test. At this point students should know the concept of how to create the Chinese character. It is not just drawing lines, but they (the students) should know what the word means to be able to draw it.

His teacher went on to say that Aidan only speaks when called upon, and he rarely raises his hand. He answers when he is called on, and sometimes the teacher asks other students to help Aidan find his place in the reading. Then he is able to find his place and answer.

Aidan's inattentiveness was noticeable when I went to observe him in class. The day I was there, the teacher was using direct instruction during reading. The teacher was in front while the rest of the class followed along and answered. The students all had Chinese books and there were Chinese characters taped on the Smart Board. The teacher was reading in Chinese and every so often would stop and ask students a question which they would answer in Chinese or point to a word on the board and students would go "ahhhh" when they understood. Some students recited in Chinese while others were silent. At one point a student asked another "What is ginza silver?" The class answered "gold!" During this time Aidan put his head on his desk and started playing in his desk

while making sounds. Aidan kept looking at the student on his left. Aidan put his head on his desk. The student to his right started slapping his desk while another student hit his back while getting up to get a tissue. The student got a tissue and put it on his head. He then got out scissors and tape while Aidan was playing with his pencil. The other student was still slapping his desk while the student on Aidan's left was drawing on his tissue with a pencil. The teacher was writing characters on the board. Some students were not responding and the teacher walked around the room trying to get the other students more engaged. Aidan was playing with his pencil and tape. After 15-20 minutes of the teacher explaining vocabulary words and choral reading, the students put their books away. Aidan took a cap off his marker with his desk open and was putting a tissue on his marker. Aidan looked around and started scratching his arm. The student on Aidan's right was talking in English, as was the student on his left.

The teacher passed back a test and Aidan smiled and put it in his desk. The student on Aidan's left asked in English to see it and Aidan shook his head no. Aidan started playing again with his marker and tissue. The student on Aidan's left gave Aidan his pencil with a tissue wrapped around it. Aidan started to open up the tissue wrapped around the pencil. I asked Aidan what he got on the test and he asked if he could show me at home. He went to read a book on the pillows in the reading corner. The student who was sitting on Aidan's left started to talk in English about the test to the student on the right side of Aidan's desk and said that the teacher never puts their scores on the test. He asked the other student what he got on the test and the student replied that he would show him on the bus.

Aidan's inattentiveness to the teacher and lesson continued. Aidan returned to his desk and put headphones in his ears while the student on his left continued to play with his pencil and tissue. Another student started to sit on his desk. Then the student to Aidan's right stood up and started writing. Aidan closed his desk and tried to pay attention to the board. The teacher had switched from reading a Chinese book to having students read their written work. Different students were called on to read the same sentences in Chinese. Aidan licked or bit his arm. Another student played with a paper game and another had his leg up on his desk. The teacher was pointing to the characters on the student work as a student read it. Then the teacher corrected it. Aidan pulled off his band-aid on his leg and did something to his arm to make it bleed and said "Ouch." A student sat on his desk while Aidan and the student on his left started playing with the pencil again. Boys got up to talk with each other in English while the teacher was talking in the microphone.

At 2:30 the boys started throwing pillows and rubber bands while the guest teacher took Aidan to another place for Chinese reading. She chose a book to read and took it with them. The schedule said that Science was supposed to be next which Aidan asked me to stay for, but when the guest teacher came to take him, I eventually left the room. I went to look for them and found them in a hallway. The guest teacher had Aidan read to her for 45 minutes in Chinese while she asked him questions about the reading. He answered in Chinese. When we got home, Aidan asked me if I could come again to his school like I used to do when I taught the Bravo music curriculum when he was in kindergarten and first grade. I told him that I would like to, but could not because now I

was a full-time teacher in another school. He asked again if I could come and stay with him in his class.

Aidan's English Classroom: Observation and Teacher Interview

This is Aidan's second year of English instruction. There has been no direct teaching of English reading instruction. In third grade the English teacher taught the students the third grade reading curriculum even though they had never been taught how to read or write English in school. Last year the students wrote a biography of a famous person and this year they will be researching a state and writing a report. The students are expected to do this in school, but we will be scaffolding much of the writing at home with Aidan to help him finish in time for the parent visit to view the report.

Earlier that day I was a guest in Aidan's English class. When I walked in, all the students in Aidan's class said "Hi Aidan's Mom!" They know me from kindergarten when I was able to come in and teach the Bravo music curriculum and also Art Adventure. All of his class still remembers me, which is great.

There are many signs on the walls such as Wild About Books, idioms, and sight words. There was also a lot of student work on the walls such as haiku poetry, "I Am" poems, student pictures with their names and what they did over the summer written inside a large picture of eyeglasses.

The teacher was talking to students about decorating their journals. There were seven tables with four or five chairs around the room. I sat at a table in the back corner. All of the students were sitting on the carpet listening to the teacher talk about what they

would be doing. Aidan was sitting at the back of the circle with a girl next to him. Before I walked in, the teacher had asked the students to turn to an elbow partner and share, and Aidan didn't have anyone next to him so another student moved next to him to be his partner. His English teacher told me that Aidan sits away from other students in the class, but that students come to him. She kept repeating that the kids come to him in the room and he will talk to them. But he does not initiate interactions with other students.

As his English teacher talked about how the students would be using stickers and paper to decorate the backs of their journals, they said "ooohhh" and "aaahhh" when the teacher showed them how they could cut the paper to fit their journals. The students started to pick up different magazines that they would look at in the middle of the floor. Many students were talking and Aidan picked up a magazine and sat at a table of four with a group of students. He said "Almost nothing in here" and "interesting." Another student asked, "What do we do?" Another student came up and asked me to get scissors down for her and I told her to ask her teacher, as I did not want to be side-tracked from recording and observing.

Students started cutting out pictures from magazines and they started to laugh about a *Sports Illustrated* picture. Aidan said to the group "Look at the snake. Snake, egg, egg, egg." Aidan showed a picture to another student who was not looking. Another boy asked Aidan about the number two. Two boys and Aidan were looking at a snake picture that said *Leggo My Eggo* and Aidan read it aloud. The teacher asked one student to move away from the table because there were too many students there so he did. The teacher

came over to tell students to whisper because she was trying to conduct reading assessments for their level of reading. The teacher said to me, “I didn’t think it would take this long,” and I smiled. Aidan kept cutting out animal pictures. Everyone had their notebook out, but I didn’t see Aidan’s notebook. A girl who was sitting next to Aidan said, “Who wants their baby_____?” I didn’t hear the last word that she said. Aidan said “Those are baby geese” and “everything raptor.”

I asked Aidan where his notebook was and he pointed to a plastic colored box on the floor with a white binder. He said it was in there. I took it out to look inside, and I saw a Haiku poetry sheet not filled out. There was a Café sheet about what they should be working on in literacy. His Café sheet noted that he needed to work on accuracy and some examples were “flip the sound” and “skip the word then come back.” There was also the strategy of cross checking by seeing if the words and pictures looked right. As I looked through the binder, all of the work sheets were blank. Aidan’s notebook that he was supposed to be finding pictures for had a Table of Contents that he wrote in with subjects/predicates. There was also a section for Academic Vocabulary Journal with words such as *peculiar*, *strange*, *odd*, *unusual*. He had also written in the word *synonyms*. After this word he was supposed to write the words that meant the same thing and he wrote *synonym*, *strange*, *odd*, *unusual*. He was also supposed to draw these words and what they mean and he chose *deciding/picking* and wrote these two words in his notebook. He drew a good picture and was also supposed to make a personal connection with the word. Aidan wrote “He is picking jut sunniskrem” and “He is picking just sundones.”

Another student's mother was helping teach the advanced group out in the hallway or another room and came in to talk with the teacher.

After I looked at Aidan's notebook, I started to listen to what Aidan's group was saying and they were talking about snakes' lips as they are cutting out and gluing pictures. Aidan asked me to bring home a picture that he had cut out because they were cool. So I said okay and then he continued to find more pictures for me to bring home. He pasted *Leggo My Eggo* words on the back of his notebook with a picture of a snake swallowing an egg. Aidan continued cutting out animal pictures while two other students started reading to self. The teacher told students that when they were done cutting, they could read to self. The teacher reminded students that clean up was in ten minutes. Students started singing the *Clean Up* song. Aidan kept giving me pictures to take home.

I asked Aidan if I should stay for lunch. He said "yes" so I asked him what time lunch was and he said he did not know. Another student said "12:20."

After the students went to lunch, I asked his English teacher if I could ask her a few questions about Aidan's learning and she readily agreed. I asked how she saw Aidan as a language learner and she said that Aidan was a very enthusiastic learner when he was drawn in. When there was something that he wanted to learn, he would grab it and go with it. She said that as a language learner and starting out with reading, once they tackled that [reading] everything seemed to go more smoothly. "So I think with Aidan, tackling those difficult things first and then sailing." I asked what his ability in reading and writing in English was and she said that he had difficulty with reading and spelling.

She said his interest was much higher than his ability, but that he was catching up. He was currently at a level M in Fountas and Pinnell, (2011) but he should be listening to R level books on RAZ kids (which is the audio version with graphics and following along with the words). I said that he really liked listening and watching the audio books and she suggested letting him listen to the higher-level books too. I asked how he worked in class and she said that he seemed like he was working and when she looked at him, she thought, “Oh my gosh, what have you been doing?” She said that sometimes he works and sometimes he sits there. I asked if it was when it was reading and writing that Aidan tended to not work and she said, “Yes, exactly, when it is work, yeah, you know.”

Aidan’s Literacy Practices at Home

I wrote journal entries two to three times a week so I could remember and document how Aidan was learning Chinese and English outside of school. This was chosen because it could help me to remember and pick out details about his habits and accomplishments. School had become negative for us over the years as he struggled to keep up. Two years ago we hired a Chinese tutor because his teachers were telling us that he was consistently behind the other students and other parents were also hiring Chinese tutors for their children and having them study English reading and writing during the summer. We did not want to do that because the school told the parents to let the language immersion take its course and that the English “would work itself out” over the years. We hired a tutor for an hour once a week, but Aidan’s Chinese teacher and tutor could never connect to talk so it was not as helpful as we had hoped and was fairly expensive. Last year we invited a 15-year-old Taiwanese foreign exchange student to live

with us for one year. Aidan and Nash got along very well and they played and hung out a lot after school and on the weekends. Nash eventually helped Aidan with his Chinese grammar and math and they talked a lot in Chinese and then later on in English.

Since Nash has been gone, Aidan misses him. He has not wanted to speak Chinese or work on homework when he returns home. He says that the teacher has not assigned any homework for the evening. He reads Chinese with his father, but does not want to do it with me. The Chinese website is frequently down and the communication with his teacher is not very frequent. He frequently says that he has a substitute teacher and he or she does not assign homework.

Home Observations

Aidan's father wants Aidan to decide if he wants to stay in the Chinese immersion school or change to an English-only program. When I interviewed Aidan about his perception about being bilingual, he said he did not feel different from friends who do not speak Chinese. I asked him if he feels bilingual and he said no. I asked him if he liked school and he said, "Yes, because it is fun and they have good lunches and the teachers are much better than other places, or that is what I am guessing." When asked if he could describe what he liked at school, he said "Gym, art, everything. I like summaries in English where I write about a character." When I asked him how he felt at school, he said that he feels fine. I then asked when does he feel most successful and he replied, "When I get stuff right when the teacher says when I get a big check mark or star." He said he feels most frustrated when his teacher gives a lot of work to do and it is piled up. The last few questions I asked Aidan were what he would want to do when he graduates from

high school that he can not do now. He said, “Buy a car, get a job, go to college, drink coffee.” I asked if he thinks he will continue studying Chinese after he finishes high school and he said, “Yes/maybe because I like it and I want to learn every single last character.”

Parental Perspective on Aidan’s Language Learning

From a parent’s point of view I feel partially responsible because I advocated for Aidan to go to the Chinese immersion school instead of the English part of our local school. Looking back at preschool, Aidan did do one year of Spanish and he was a child who liked to play mostly by himself. When his preschool put on a performance, he did not want to participate and it took much cajoling from me to get him onto the stage. When we were trying to decide if we should have him stay one more year in preschool, we decided to put him in kindergarten instead of staying another year in preschool. Now knowing how many boys were held back, it would have been better to also hold Aidan back one year to gain confidence and be more in line with the other boys. He is so much younger than his peers and, until the fourth grade, he was consistently six months behind the other students each year. He would catch up by the Spring and then in the Fall the race would begin again of trying to stay on track with the other students, only to fall behind by Christmas break. Aidan has spent many breaks, weekends, summers doing homework to try and keep up with the Chinese immersion curriculum. We always told teachers that the 15 minute homework would take Aidan 1-3 hours to do each evening.

Fourth grade has been a very difficult year. We found out that Aidan is dyslexic and now his reading difficulties make more sense. Unfortunately his dad and I did not

agree up to this point, on what course of action to take with Aidan's schooling and this was a divisive issue. This year he has fallen behind and due to my lack of knowledge in Chinese I do not know what to do to help him with Chinese. He seemed to not be able to figure out what to do as he refused to do homework. He reads in English because we know the language, but there is so much writing homework that seems boring and repetitious. Aidan often forgets to bring his work home and it is hard to know what is going on in school each day (see Appendix G, Home Journal). He enjoys being read to and his English comprehension is very good.

Formative and Summative Assessments

Formative and summative assessments are currently used in education as a way to measure a student's progress and learning. Some of the formative assessments used in the classroom are the weekly Chinese spelling tests that cover two units of study and also math words in Chinese and English. Each spelling test has about 15 words that include the Chinese characters and the English translation. I was going to use these spelling tests as a way to gauge Aidan's learning, but he has consistently forgotten to bring home his spelling tests. When I go to his locker, homework cubby, or desk I can usually find many papers that have not been brought home. When I have found his spelling tests, there is usually zero to three words correct. Aidan's Chinese teacher sends e-mails to parents to remind them about spelling tests and new vocabulary. A typical comment in the e-mail is "Almost all students did a fabulous job in the spelling test." We recently found that Aidan is dyslexic. As a dyslexic student he may never be a good speller and spelling is very

difficult for him. Figure 2 is an example of the math spelling words that fourth graders need to learn in Chinese and English.



Figure 2 Examples of math vocabulary words in Mandarin Chinese and English.

The largest summative assessment at Aidan's school is the Chinese proficiency test called the Youth Chinese Test (Confucius Institute Headquarters, 2013). Students are tested online and it is administered by the Confucius Institute/Hanban and the University of Minnesota. The proficiency levels are determined by using combined scores from the Youth Chinese Test. It is designed for non-native speakers who are at an elementary-intermediate level in Chinese language.

The YCT 3 (grade 2) tests students on the ability to use Chinese to conduct simple and direct communication on topics they are familiar with. This level is the equivalent to an excellent level for Chinese beginners. This test has two parts, reading, and listening,

and each is worth 60 points as a passing score. The maximum score for each part is 100 points; a combined passing score is 120, the highest combined score is 200 (Report to the School Board, 2013).

The YCT 4 (Grade 3) tests for communicative tasks that a person visiting China would be likely to use when visiting. It test has three parts, listening, reading, and writing. Each part has 60 points for a passing score; the maximum score for each part is 100. The total combined passing score is 180 points; the highest combined score is 300 (Report to the School Board, 2013).

Table 2 shows Aidan's scores for two years on the standardized international Chinese youth proficiency test for non-native speakers.

Table 2 *Youth Chinese Test*

A standardized international Chinese youth proficiency test for non-native speakers.

YCT Tests (YCT) 3	Date: 05/20/2013	Score: 185.00
	YCT Listening	97.000
	YCT Reading	88.000
YCT Tests (YCT) 4	Date: 05/24/2014	Score: 125.000
	YCT Listening	82.000
	YCT Reading	33.000
	YCT Writing	10.000

Aidan took the YCT 3 in 2013 when he was in 3rd grade and passed with a score of 185.00. In 2014, Aidan took the YCT 4 in 4th grade and had a total score of 125, which was not enough to pass. This test had the added component of writing and his Chinese reading score also dropped significantly this year. The students who passed this test were

given a certificate and invited to the University of Minnesota to attend an award ceremony and reception. We were waiting for the test scores and announcement about the reception that we had missed last year due to a late communication by the school. After not receiving anything about the ceremony and reception, I finally e-mailed and was told that only students who passed were invited.

Conclusion

In this chapter I presented the results of my data collection. First, data was collected by observing Aidan in his Chinese and English classrooms and after I interviewed both teachers about Aidan and his language learning. Second, I looked at Aidan's literacy at home. He had a survey and interview that he provided answers to, and I journaled about his literacy practices at home and observed his behaviors about learning Chinese and English. Third, I shared my perspective about Aidan's language learning. Last, formative and summative assessments followed. In Chapter Five I will discuss my major findings, their implications, and suggestions for further research.

CHAPTER FIVE: CONCLUSIONS

The goal of this study was to explore my son's acquisition of L2 Mandarin Chinese literacy while a student at a Mandarin Chinese immersion school. I wanted to investigate how being immersed in Chinese has affected his literacy in Chinese and English and to better understand how Aidan sees himself as a language learner. I feel there are limited research and comprehensive performance assessments on Chinese immersion schools in Minnesota because Chinese immersion has only recently been added to language immersion offerings for the community. Therefore, this study explored how a nine-year-old, L1 English, elementary male student in fourth grade is acquiring Chinese literacy and how he sees himself as a language learner. Through the collection of these data, I sought to find the answer to the following questions:

- How does Aidan perceive himself as a language learner?
- How do Aidan's teachers perceive him as a language learner?
- How do I perceive Aidan as a language learner?

When I started this capstone in May 2014, I thought that Aidan was struggling because of not being able to transfer his L1 to an L2. However, two-three years ago I started talking with different professionals that worked with immersion schools and it was suggested that I do an auditory processing test with Aidan to see if he had some sort

of problem understanding speech in noisy environments, following directions, and discriminating between similar speech sounds. We finally understood that his not being able to keep up with his peers is because of having dyslexia and ADHD. It is difficult to isolate if being inattentive in class is because of this or if it is because of not understanding what is going on in class. Being able to discriminate between the learning disorder and the second language is not an easy task. During the last four years we had no comparison between Aidan and how the other students in his school were doing, so I did not know that other students were not having as much difficulty as Aidan. I tried talking to other parents and was not offered any help in understanding how their children were doing. Slowly, there was a small group of kids who were pulled from the program by their parents because of dyslexia, ADHD or other concerns. Now that Aidan has reached a fourth grade slump in learning we are unsure of what to do and where to go. One thought is to let Aidan continue if he really wants in his learning of a second language. Or we can pull him out of the program and school that he knows. While he is not learning and it could damage his self-esteem, it could also hurt him to have him change schools and friends. This is how the three research questions were arrived at in a second committee meeting. The committee was trying to guide me in focusing on Aidan as a person and to look at the situation holistically rather than focus on test scores and homework grades only. However, the focus kept growing in size as I tried to figure out why Aidan was not progressing in his immersion school. The results of the research questions were presented in Chapter Four. This chapter will address my major findings, implications, limitations, and suggestions for further research.

Major Findings

Several themes and patterns emerged when analyzing the data:

1) Chinese and English teachers not knowing how to deal with a student who appeared unmotivated and at times unwilling to work. Aidan's teachers feel he is an enthusiastic learner, yet they both focus on Aidan's issues and how much time he is taking from them during class time.

2) Aidan not wanting to do reading or writing in Chinese at home.

3) Stress at home because of always thinking about homework and trying to get Aidan to complete it.

Aidan's Perception of Himself

I asked Aidan how he perceived himself as a language learner. Aidan's responses to the Bilingual Self-Perception Survey and Semi-Structured Interview were not easy to figure out how he really thinks about being a language learner. He answered questions in a positive way, but when compared to his actions in the journal and home observations, he did not seem to be an enthusiastic learner or interested in studying Chinese much at home. When I interviewed Aidan about how he felt about himself as a bilingual, he said that he does not feel any different about speaking another language and does not feel bilingual.

The semi-structured interview questions with Aidan in Appendix D discussed how he saw himself as a language learner, who his friends were, literacy experiences in

and out of school, and his perceptions of reading and learning in Chinese and English. He has three good friends who are American and they speak only English together. He says he is a good friend and a good learner. Aidan says he likes watching Chinese films in school and gym is his favorite class. Aidan says he likes school. When asked what he likes about school, he says, “because it is fun and they have good lunches and the teachers are much better than other places, or that is what I am guessing.” When asked how he learns at school, he says he does not know. But he says that teachers tell him when he does a bad job, but he does not know when he does a good job in class.

In Aidan’s interview, he commented about how he sometimes feels in English class. From Aidan’s perspective he said that his relationship with his English teacher is not as good because she will come up and tell him *to work*. He says that he needs more time and that she does not give him enough time to work. As I think about how Aidan thinks of himself as a language learner, he seems like he enjoys school and the routine, but he seems heavily influenced by his teachers and their seemingly negative perception of him.

Aidan’s Chinese and English Teachers Perceptions of Him

We went to Aidan’s spring conference with his Chinese teacher and when we asked how Aidan was doing in class, his teacher said that he had no data for Aidan and that even though he, the teacher, is trying to help him, Aidan has not done any work for him to show us. We asked him what he was doing to help Aidan and he said he has done everything to help him and did not know what else to do for him. He said Aidan is two

years behind in Chinese and he again said that he does not know what to do. I feel that this is an example of how the relationship that Aidan has or does not have with his teacher is contributing to his identity as a language learner. I feel that Aidan's Chinese teacher thinks that Aidan is too far behind for help and therefore has discounted his ability instead of finding out what Aidan can do and what he can do to help him move ahead at his ability level. We asked about how Chinese is being scaffolded for him and the only answer was that the Chinese guest teacher pulls Aidan out for individualized help. His Chinese teacher says that Aidan is benefitting from the Chinese guest teacher because he gets to spend the most time with her. We were also told that Aidan is taking up too much of the guest teacher's time and she has no other time to be with other students. When I asked his teacher how Aidan compares to other students in his grade, he answered that Aidan is the only student who is struggling in the Chinese program. I asked if he was sure and he said yes Aidan is the only student that cannot keep up. At the end of the conference there was no plan put in place for how Aidan can succeed in Chinese. My husband and I left the conference and I felt dejected and upset.

His teachers say that they think he is an enthusiastic learner, but their words to him and me convey a different meaning. Aidan does not seem to know how his teachers tell him he does a good job. They are constantly telling Aidan's father and me that Aidan requires too much attention from them and he takes up too many resources that they cannot give to other students. However, when I saw Aidan in class and when I talk with his teacher about Aidan in class, there was no interaction between the Chinese teacher and Aidan. His teacher does not seem to know when Aidan or other children are working

and when he is not working or exactly what he is doing in class. His English teacher has also made comments that she does not really know what Aidan is doing in class or when he is working. There seems to be a disconnect between Aidan's teachers thinking that Aidan takes too many resources and time and their not knowing what he is doing or when he is learning. As Hawkins noted (2005), the child interprets what kind of place the classroom is, who the child wants to be and can be within that space. This provides a feedback loop for the child as he/she tries to find out what others' in this space think. This feedback helps children form views of school and if they feel they belong.

My perception of Aidan as a language learner

As I think about the last research question, I don't like to think that I have been influenced by other people's views of my child and his learning. But I know it is true because I have reacted to his teachers and other parents' comments.

Even though I would never wish anyone to be dyslexic, I feel better knowing that there is a reason for Aidan's difficulty with Chinese. Once I have a name for something, then I can research it, learn about it and try to help figure out the best way to deal with this. I have heard that once a dyslexic student is assessed and told they are dyslexic, then they feel relieved and have an answer about why they learn in a different way. The frustrating part is I see that not much is known about dyslexia with Aidan's teachers and I have learned that many people I have talked with recently do not know much about dyslexia and language learning. It seems to be a not very well known or talked about

brain disorder, especially as it affects learning two such different languages as Chinese and English.

There are many differences in the English and Chinese language, and researchers are trying to determine how dyslexia manifests itself in English and Chinese. Chung and Ho's research (2010) found that phonological processing deficits in L1 English speakers are a major cognitive determiner in dyslexia and reading difficulties, and less important with L1 Chinese speaking children. The tasks that seemed to distinguish the children in both Chinese and English with dyslexia were the speeded naming, morphological awareness and visual processing of words (Tong et al., 2009). Since this thesis is not solely about dyslexia and more about Aidan and how he is perceived by others and himself as a language learner, I have been trying to determine throughout the writing of this thesis what cognitive issues could hinder Aidan in his language learning. It has not been an easy task and as the year progressed, I saw a marked improvement in Aidan's English reading ability. After I finished the five-week study of Aidan for this thesis, I have been going to workshops and trying to figure out the best approach for Aidan to work on his English language skills in decoding and spelling. Since English is not a very transparent language or a less direct correspondence between letters and sounds, Aidan will most likely need a multi-sensory reading program to help him understand the different spellings of words in English and the structure of words.

In addition to providing Aidan with supplemental English language instruction he is also receiving additional support with social skills. He is going to be receiving that

support at school and also in an evening class to help him learn how to advocate for himself at school, understand better what is expected of him and make friends. I hope that he will be able to communicate better with teachers and peers because at home he is very talkative and knowledgeable about many interests that he has. He does not show that kind of interest at school.

Advice and Dissemination of Results

Suggestions for further research on dyslexic students in language immersion schools is to test their first language skills earlier instead of waiting until third grade to see what their English reading skills are. At a workshop presented by Tara Fortune at Groves Academy on December 9, 2014 on Assessment, Intervention and the Struggling Dual Language Immersion Learner, she talked about The Montreal Study and the summary of findings by Genesee et al. (2003), which are the following: L2 readers who are high risk for word decoding difficulties have a core set of phonological processing weaknesses which are also experienced by L1 readers, and L1 tests can be used to predict risk for L2 reading and language difficulties.

This can be used as a screener to see which students are struggling as early as kindergarten in the L1 and to act sooner in the language program rather than wait until the content learning is too great to catch up. Tutors that are specialized in certain reading programs have also been helpful for many dyslexic students as well as small groups and classroom interventions for phonological awareness activities and reading support.

Having dyslexic students find activities that they are interested in is very important for the dyslexic person. Finding interests that they can excel in promotes their self-esteem.

Henry (2009) recommends reading instruction in a multisensory approach for dyslexic children. Multisensory teaching is explicit instruction that focuses on the structure of language. It also incorporates visual, auditory, and kinesthetic pathways in the brain by perceiving the speech sounds in words so students can link the speech sounds to the letter patterns. It is also important to teach slowly and make sure that instruction does continue until the skill is mastered (Henry, 2009).

During the course of this study, the focus was necessarily changed somewhat. I researched endlessly and talked to many different professionals about his difficulties in learning Chinese. I spent many years talking with Aidan's teachers, immersion specialists, eye doctors, neurological reorganization specialists, and many others hoping to find out what was holding Aidan back. This case study has been very helpful as a way for me to reflect on how Aidan acts with his teachers, peers, and parents and what his skill level is in reading Chinese and English. In using reflective writing, I was able to make critical connections that I was not able to previously. I connected what I thought were isolated events and now I understand his limitations in a more holistic perspective (Jasper, 2005). I am much closer to understanding what Aidan will need to move ahead in his English language learning on the original questions, but now the focus changed as Aidan's dyslexia came to light. This could be of great help to both parents and teachers of children experiencing similar difficulties. His dad and I are trying to figure out how

Aidan can stay in Chinese immersion since our family has invested so much time and energy into the program. My advisor and a language immersion expert have suggested that this could be a benefit for Aidan if he can stay in a language that he has invested so much time in since language learning will be difficult for a dyslexic person. Aidan says he would like to stay, so we are currently talking about Chinese and English tutors and if we can invest the time and money into what Aidan needs to move ahead in the program. I have learned so much by going to many workshops at Groves Academy and The Pacer Center and learning about dyslexia and ADHD and I have a new understanding of what I need to do as a parent. At this stage, I have not been able to incorporate it all yet and I need to figure out how to do that. I am trying to see if a new school might be more accepting of his current limitations of cognitive processing and inattention. In March, 2015, we were able to create an Individualized Educational Plan (IEP) so that Aidan can get additional support in reading and writing by the Special Education team at his school. Because of the nature of an immersion school and not being explicitly taught phonics and having reading instruction from kindergarten through second grade in English this will be crucial for him to learn English spelling and sound with letter correspondences. Unfortunately his school is not offering any special education services regarding Chinese. Hopefully this will change in the future and students who need additional support in a foreign language will receive appropriate reading and writing support for that language.

There are many strategies that can be employed for students with dyslexia and ADHD. Some of the recommended accommodations for Aidan in the classroom are to have frequent breaks, to be able to use a computer for writing and spelling, to have direct

instruction in a multi-sensory reading program, to use audio books, and to be given extended time on tasks. Some additional strategies that could help Aidan are to have a teacher who will motivate and encourage him; realize the tremendous effort that he is exerting in school; keep in regular (daily) contact with parents about work and expectations; use hands on activities (Amen, 2002). The most important thing to remember is that dyslexia is not an indicator of intelligence. I see my son struggling every day with reading and writing in English and I feel bad because it seems that people who struggle with this are viewed as not smart. When people who do not know him look at what he has written, they look shocked and do not know what to say. I think he feels ashamed because no one seems to want to talk about this disorder. My main goal is to have him feel better about himself and to be a confident person at school.

As indicated in this research, further academic research and/or studies are needed to explore strategies and/or expectations for dyslexic students in language immersion schools. Since dyslexia is still not understood among many people, including teachers, training in multi-sensory reading instruction and early signs of dyslexia would help teachers better understand dyslexic students' needs.

I plan to share my finding with my colleagues at the MELED conference next fall as well as other parents of children who are experiencing difficulties with language learning. I think that sharing of information is essential for student achievement and that everyone should work together to achieve this. It is not something that can be done alone.

Limitations

Some of the limitations are how dyslexia manifests in the Chinese language compared to the English language. The small scope of this study as a case study of one child can only generalize for the individual student being studied. Studying Chinese and English. Studying the effects of dyslexia on a larger group of Chinese immersion students with an English L1 could potentially gather more data about how to improve learning with interventions and teacher strategies.

Suggestions for Further Research

Some studies show that dyslexia manifests itself differently in speakers of Chinese than in English because of the different writing systems and sound correspondences. In Chinese words are memorized to sounds whereas in English sounds are mapped to letters. Siok, Spinks, Jin & Tan (2009) studied 12 Chinese children with developmental dyslexia and found that the brain in Chinese children had an impairment in visuo-spatial processing as well as a disordered phonological processing that is found in dyslexic English reading children. By looking at the different MRIs of these children while reading Chinese the study concluded that the difference in the Chinese language compared to English results in Chinese dyslexics having a phonological processing disorder and also a visuo-spatial deficit. This is different for children who are only learning English.

Conclusion

The purpose of this study was to explore how a nine-year-old, L1 English, elementary male student in fourth grade is acquiring Chinese literacy and how he sees himself as a language learner. Through the collection of these data, I sought to find the answer to the following questions:

- How does Aidan perceive himself as a language learner?
- How do Aidan's teachers perceive him as a language learner?
- How do I perceive Aidan as a language learner?

Because learning language is an ongoing process, I hope that Aidan continues to see himself in a positive light in spite of his language difficulties, nor have I finished my research with the end of this particular study. Second, I hope that his teachers see the potential of a fourth grade student who is trying very hard to learn even though his outward appearance is of inattention and not trying. Last, I want to be able to find ways to support my son so he can catch up in school and find ways to express himself to show his intelligence and what he knows. Dyslexia is a neurological disorder that could affect as many as one in five people (Henry, 2009). Unfortunately not many people seem to be informed about how to teach dyslexics and what the disorder encompasses, especially when children are learning a second language. My goal is to continue learning about it and to also help educate others about this disorder to better serve all students and my son.

APPENDIX A
DIRECTORY OF FOREIGN LANGUAGE IMMERSION
PROGRAMS IN U.S. SCHOOLS

Directory of Foreign Language Immersion Programs in U.S. Schools
Summary of Data, 2011

Number of Language Immersion Schools by State

State	All Schools	School Districts	Private Schools	Pre-school	Elementary	Middle	High
AK	11	3	0	1	7	4	2
AZ	10	7	6	6	7	3	0
CA	25	12	11	12	23	10	3
CO	5	3	2	2	5	3	0
CT	1	0	1	1	1	0	0
DC	4	1	1	3	4	2	0
FL	10	7	3	3	9	3	0
GA	2	1	1	2	2	0	0
HI	34	1	11	12	15	11	9
IA	2	2	1	1	2	0	0
ID	1	1	1	1	1	1	1
IL	7	1	5	5	7	1	0
IN	7	2	1	1	3	3	3
KS	1	1	0	0	1	1	0
KY	3	2	0	0	2	1	0
LA	31	10	2	4	23	9	1
MA	15	5	0	0	11	4	2
MD	16	5	0	0	10	8	1
ME	1	1	1	0	1	0	0
MI	11	6	3	5	9	3	0
MN	50	19	4	7	32	16	6
MO	7	2	2	3	7	2	0
MT	2	0	2	2	2	2	0
NC	19	8	2	2	17	4	1
NJ	3	3	3	2	3	0	0
NM	1	1	0	0	1	1	0
NY	4	2	2	2	4	0	0
OH	7	4	1	0	7	4	0
OK	5	2	1	0	4	1	0
OR	27	4	6	6	14	11	6
PA	7	5	1	1	5	2	1
SC	5	2	1	1	4	0	0
TN	1	1	0	1	1	0	0
TX	12	7	1	2	10	2	1
UT	58	15	0	1	56	2	1
VA	24	1	1	1	13	10	1
WA	11	2	1	1	7	3	1
WI	8	2	1	6	7	1	1
Total: 38	448	151	79	97	337	128	41

This chart includes, for each state, the number of immersion schools, the number of districts with immersion schools, and the number of private immersion schools. Also included is the number of immersion schools at each level (pre-school, elementary, middle, and high school). To categorize the immersion schools by level in each state, we used the terminology used by the schools (e.g., if the school was called a junior high or middle school, it was included in the middle school column). For those schools that included more than one level (e.g., K-8 or K-12), we included them in all the relevant columns (for a K-8 school, we listed them under elementary school and middle school; for a K-12 school, we listed them under elementary, middle, and high school).

APPENDIX B

SEMI-STRUCTURED INTERVIEW FOR AIDAN'S CHINESE TEACHER

Semi-Structured Interview for Aidan's Chinese teacher

1. How do you see Aidan as a language learner?
2. What is his ability to understand Chinese when reading, writing and speaking?
3. How does he respond to and speak with the teacher in class?
Please describe his speaking and responses. Can you give me some examples?
4. How does he speak with classmates in class in Mandarin or English?
Please describe and give some examples.

APPENDIX C

SEMI-STRUCTURED INTERVIEW FOR AIDAN'S ENGLISH TEACHER

Semi-Structured Interview for Aidan's English teacher

1. How do you see Aidan as a language learner?
2. What is his ability to understand English when reading, writing and speaking?
3. How does he respond to and speak with the teacher in class?
Please describe his speaking and responses. Can you give me some examples?
4. Does he speak with classmates in class in Mandarin or English?
Please describe and give some examples.

APPENDIX D
SEMI-STRUCTURED INTERVIEW WITH AIDAN

Semi-Structured Interview with Aidan

1. Are you a good friend? How would you describe yourself as a friend? Can you give me some examples of what you do as a friend? Do you speak English or Chinese with your friends at school?

2. Who are your friends? Tell me about them and what you do together. Are your friends Chinese or American? How do you talk with them? What do you do with them?

Do you think they are good friends? Why?

3. Are you a good learner? What is your favorite subject in school? Why? Can you describe what you like about it and how you go about learning it? Is this in Chinese or English?

4. How would you know? How do you know you do well in a class? How do you know if you don't do well?

5. If your teacher described how you learn, what would she say?

APPENDIX E
BILINGUAL SELF-PERCEPTION SURVEY

Bilingual Self-Perception Survey

1. How do you feel being bilingual compared to Americans who speak only English?
2. How do you feel being bilingual around your friends who speak only English?
3. Do you feel like you are bilingual? If you answered no, why not?
4. Do you like your school? Why? Describe what you like about it and what you don't like about it.
5. Do you like going to school in Chinese? Why? Is it fun to learn in Chinese? Follow up: What do you like about learning in Chinese? About being able to speak and read in Chinese?
6. How do you feel at school? Follow up: When do you feel you are most successful? Why do you feel most frustrated?
7. If you could see ahead to high school, what would you want to be able to do when you graduate from high school that you can't do now? Do you think you will continue studying Chinese after you finish high school?

APPENDIX F

LETTER OF CONSENT FOR CHINESE AND ENGLISH TEACHER

September 22, 2014

Dear :

I am studying at Hamline University. To get my master's degree, I need to do research outside of my classroom. I want to study how Aidan Koehn sees himself as a language learner in a Chinese immersion classroom. Hamline University has given permission for this research. I need your permission to talk with you about the study.

I will be looking at your perception of Aidan Koehn as a language learner. I will give you a short semi-structured interview about Aidan and how he interacts in English in the classroom. I will report his formative and summative assessments in class work and your perception of his learning and progress, but I will not use any names. I will also be observing in the classroom one or two days so I can see how Aidan is as a language learner. Please let me know if there are days and times that are better than others to do this between Oct 6 – Nov 13, 2014.

The research will be published in a book and online. If you do not want to be in the research, that is ok. If you want to leave the research later, that is ok. You just need to tell me.

If you have questions, contact me at 612-232-6422. You can also contact my Hamline Professor, Ann Mabbott at 651-523-2446 (amabbott@hamline.edu).

If you want to participate in the research, please sign both letters. Return one to me by September 30th, 2014 and keep one.

Signature _____

Date _____

APPENDIX G
HOME JOURNAL

Select Home Journal Entries

Tuesday, October 7, 2014 Aidan forgot to bring home his vocabulary test in Chinese. We didn't do any homework and went to the Fire Department Open House instead.

Wed, October 8, 2014 Aidan spent 20 minutes on an English writing assignment about Author's Purpose and a second assignment for 10 minutes in English about reading a passage and writing about how he would get dressed to go sledding using sequence words with me reading to him while he answered the questions and wrote the answers. I helped him spell every word and told him when to put in spaces between the words. It takes a lot of concentration for him to write and he reversed letters "b" and "d". He also wrote "no" instead of "on". It is difficult for me to help him because he tries so hard and I get really sad thinking of how difficult it is for him. I also read 20 minutes in English to him from a book about "Knights" that he checked out from his school library. His English teacher e-mailed me to say the following after I told her why he was only doing two worksheets out of eight that she assigned to him to complete for the week. Until we know more about Aidan's eyes I didn't want him to do too much because I am concerned it is really difficult for him if he has convergence insufficiency.

Aidan's English teacher sent two worksheets home to do. One was a repeat of the sheet that took him 20 minutes to write out and then another sheet. I threw away the sheet that he was to redo, because it would be very frustrating for him to have to do it again when it was so difficult the first time. He keeps forgetting to bring home his vocabulary test he did on Monday. He also forgot his math homework.

Friday, October 10, 2014 Aidan did not want to study his Chinese vocabulary and was adamant about not doing it. When I ask him why he doesn't want to do it, he says he doesn't know why. He loves being read to and wanted to read a book that I had bought for my ELL students called "Third Grade Angels". I read a chapter and then said that he needed to do some Chinese vocabulary words because he had a test on Monday. We read one more chapter and then he studied five Chinese vocabulary words. He was frustrated because he said he didn't know what they said when I asked. So I persisted and we found the meanings on "Yabla Chinese" an online Chinese English Pinyin Dictionary. He has to write in the Chinese character in Pinyin and say the character out loud. The characters that are underlined he also has to write.

Saturday, October 11, 2014 Aidan did not want to study his Chinese vocabulary and had promised to study one page today. But after seeing the dyslexia film at Groves Academy with Mom and Dad, he said that he didn't really learn anything at the film. But he said he understood when the film said that words get mixed up when people are dyslexic. I told him that it helped me to understand how he or other people with dyslexia may think and read. I told him that reading was easy for me, but I am not good at math and it is really difficult for me. Everyone has something that is difficult for them and for everyone it is something different.

October 12, 2014 Aidan and I got up early and he was looking at the book “Cloudy With a Chance of Meatballs”. I asked if he was reading and he said yes. Then he asked if I could read it to him before yoga class. I said yes and read it. At one point I said I had to get going to yoga and he asked if I could finish it and I said yes. When I finished reading I told him to do RAZ kids while I was at yoga and his dad was sleeping. He did that. After Aidan returned home he said he would study, but didn’t.

October 18, 2014 I asked Aidan to do eChinese and he refused. I then asked him to pick out a Chinese book and to read while I made pancakes for breakfast. He said all of his Chinese books are lame. I said we could read together in English and he refused.

October 22 Aidan did his math and his eChinese and he got a lot more correct 6/10 instead of just one correct like he has been getting since school started.

November 6, 2014 – great day. First time in a long time that Aidan has brought his English homework home. Usually all homework is left at school.

November 8, 2014 – He agreed to study English spelling words. We played a game with each word that he spelled. I said it, we spelled it in the air and then I hit a soft ball at a large ball that he used as a shield. That is his favorite game today so we incorporated it into the spelling words.

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